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ABSTRACT

The purpose of this study was: (1) to replicate earlier studies on vocational maturity by Super and Crites, neither of which included Mexican-Americans in their samplings; (2) to restrict the study to Mexican-American populations in both urban and rural areas of California; (3) to make intra-state comparisons of findings; (4) to compare results obtained with those of the original studies and; (5) to establish a type of normative data for students of Mexican extraction. A population of ninth grade boys of Mexican descent was used. A review of the literature in areas related to the study is presented and organized into categories which include occupational choice, vocational maturity and self concept. This report provides sociological data on the communities and schools used in the study. Although the document reports in part findings on such items as the vocational maturity interview and the Vocational Development Inventory final conclusions depend on the outcome of the study toward which all initial work has been directed. An extensive bibliography and appendix is included. (Author/EW)

Los Angeles County Superintendent of Schools
Division of Research and Pupil Personnel Services

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VOCATIONAL MATURITY OF MEXICAN - AMERICAN YOUTH

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INTRODUCTION

Preliminary Reports (Nos. 1 and 2) were concerned primarily with procedures designed for use in a study of vocational maturity of Mexican-American youth. The Final Preliminary Report deals with changes recommended in the previous reports, and in many ways serves as a possible model for the eventual product to follow the accomplishment of the actual study.

In addition to acknowledgments already accorded in prior reports, appreciation is expressed to Dr. Harry Smallenburg for granting permission to use the facilities of the Office of Los Angeles County Superintendent of Schools in preparing and duplicating necessary materials. The writer provided supplies and did the typing and most of the mimeographing on her own time, but the use of the machines was certainly facilitating.

Mrs. Joyce Carter needs special mention because she volunteered assistance with some of the clerical work and donated several lunch hours to speeding up certain processes. Commendation is accorded to Mrs. Carter for her genuine helpfulness.

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

"Vocational maturity" is a construct which incorporates the idea that an occupational choice by an individual is developmental in nature and involves decision-making processes. That is, occupational choice extends over a period of time and necessitates a series of decisions. Related to vocational maturity and the developmental process are the concepts that variations in groups may be anticipated at different age levels, and variations in individuals within groups should be expected. Comparison with physical growth is apparent. Contributions from differential and developmental psychology are likewise evident.

Associated with vocational maturity and the decision-making process are the concepts that decisions by an individual entail both environmental and personal factors. Although separately described, the two processes (developmental and decision-making) are not necessarily mutually exclusive.

I. THE PROBLEM

Statement of the problem. Major studies dealing with vocational maturity or occupational choice have limited generalizations for one or more of the following reasons:

1. None has included populations of Mexican-American youth.
2. The studies have been restricted to a relatively small geographical area.
3. Measurements obtained basically through interviews have not been compared with those obtained through the use of a scale.
4. Normative data from the studies are fundamentally limited.

Mexican-American youth were singled out because of their importance in California. Persons with Spanish surnames, the majority of whom have origins in Mexico, number over one and a half million and comprise 9.1% of California's population,[1] thus constituting the state's largest minority group. In Los Angeles City Schools, sixteen per cent of the students have Spanish surnames.[2] Seventy-six per cent of the Mexican adult population in California is employed in unskilled occupations.[3] Reasons for the imbalanced occupational distribution are found in part in educational statistics.

The median years completed in education for adults age twenty-five or over reach 8.6 for the Spanish-surnamed, 10.5 for Negroes, and 12.1 for "Anglos".[4] High-school graduation has been achieved by 26.2% of the Spanish-speaking group, 43.8% of the non-white, and 56.9% of the Anglo population.[5]

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[1]Eugene Gonzales, "The Mexican-American in California," California Education, III (November, 1965), p. 19.

[2]Jack Jones, "Bilingual Approach May Provide Answer to Educational Problem," Los Angeles Times, Part II (May 10, 1966) p. 1.

[3]Jose Antonio Villarreal, "Mexican Americans in Upheaval," Los Angeles Times West Magazine (September 18, 1966, p. 21.

[4]Philip Montez, Speech presented at First Annual Conference on the Education of Spanish-speaking Children and Youth, El Rancho High School, Pico Rivera, California, May 15, 1964.

[5]Jones, loc. cit.

The purpose of the study was (1) to replicate, in so far as possible, earlier studies published by Super[6] and Crites[7], neither of which included Mexican-Americans in their samplings; (2) to restrict the study to Mexican-American populations in both urban and rural areas of California; (3) to make intra-state comparisons of findings; (4) to compare results obtained with those of the original studies, and (5) to establish a type of normative data for students of Mexican extraction.

Importance of the study. " ... We need systematically to replicate important studies in order to give us more confidence in our generalizations"[8] The preceding quotation by Brayfield states succinctly the justification for re-using materials and procedures. Conclusions reached in one area need to be tested in other locations and under different circumstances.

Super has written " ... a better understanding of adolescent exploration of adult roles is basic to improved education as well as to improved guidance."[9] Borow has phrased the same idea as follows:

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[6]D. E. Super and Phoebe L. Overstreet, The Vocational Maturity of Ninth Grade Boys (New York: Teachers College, Columbia University, Bureau of Publications, 1960)

[7]J. O. Crites, "Measurement of Vocational Maturity in Adolescence: I. Attitude Test of the Vocational Development Inventory," Psychological Monographs: General and Applied, No. 595, 79 (1965) 2.

[8]Arthur H. Brayfield and John O. Crites, "Research on Vocational Guidance: Status and Prospect," in Man in a World at Work, ed. Henry Borow (Boston: Houghton Mifflin Company, 1964) p. 316.

[9]Donald E. Super, "Some Unresolved Issues in Vocational Development Research," Personnel and Guidance Journal, XL (September, 1961) 1, p. 13.

... "As investigations in career development help us expand and rectify our conceptions of prevocational youth and vocational man, we can proceed to revamp both educational and guidance practice as a means of establishing the stimulus conditions which predispose toward more effective vocational life."[10]

Both Super and Borow have expressed possible recommendations for the betterment of education and guidance as concomitancies of research on vocational development. Perhaps, too, there is receptivity for the type of research outlined in this paper.

Borow cites the following circumstances as possibly instrumental in bringing about additional research in occupational behavior: manpower problems, client-centered counseling, psychology of motivation, dissatisfactions of vocational counselors, and a general readiness for change.[11] Holland also admits the existence of increased research covering vocational behavior and development. but lists somewhat different reasons. The impetus, he says, stems from: financial support, data-processing techniques, better understanding of vocational behavior as related to "a wide range of human behavior and experience, ..."[12]

It seems to the writer that one of the concerns which spurred Ginzberg and associates, namely the problem of utilization of human resources, is still extant.[13] The number of eighteen-year-olds in

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[10]Henry Borow, "Vocational Development Research: Some Problems of Logical and Experimental Form," Personnel and Guidance Journal, XL (September, 1961) 1, p. 24.

[12]John L. Holland, "Major Programs of Research on Vocational Behavior," Man in a World at Work, ed. Henry Borow (Boston: Houghton Mifflin Company, 1964) pp. 259-60.

[11]Henry Borow, "An Integral View of Occupational Theory and Research," Man in a World at Work, ed. Henry Borow (Boston: Houghton Mifflin Company, 1964) pp. 369-70.

[13]E. Ginzberg, et al., Occupational Choice (New York: Columbia University Press, 1951)

1964-65 increased one-third from the previous year. Compared to the early 1950's the increase was more than 100 per cent.[14] In addition to the impact of young persons ready for the labor market, the United States can now be considered a country in which more than one in ten of the working population is a professional person and only one in twenty is an unskilled laborer.[15] Therefore, the nation's economy must be kept viable to provide employment, and education must be considered more than ever necessary for greater numbers of people. Even an alternative that work may be further de-valued as of importance to an individual because of a predicted decrease in hours devoted to a job does not negate the statements.

Having cited grounds for copying proven techniques and for adding another paper on the chosen topic, there remains only the selected population to defend. Supporting evidence has already been given to show that Mexican-Americans in California as a group are under-educated and under-employed in occupations above the unskilled level. Anything that could possibly lead to greater understanding of Mexican-Americans and the corollaries of improved conditions educationally and economically for them is worth trying.

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[14]Eli Ginzberg, "Social and Economic Trends," Vocational Education, The Sixty-fourth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1965) p. 23.

[15]Seymour L. Wolfbein, "Labor Trends, Manpower, and Automation," Man in a World at Work, ed. Henry Borow (Boston: Houghton Mifflin Company, 1964) p. 165.

II. DEFINITIONS OF TERMS USED

Vocational Maturity. Super defined vocational maturity as "the place reached on the continuum of vocational development from exploration to decline"[16] His Career Pattern Study has been dedicated in part to the measurement of vocational maturity. Because his work has provided a foundation for the writer's study, Super's definition of vocational maturity has therefore been accepted.

Mexican-American Youth. Subjects selected for the present study of vocational maturity were ninth grade boys, actual or potential citizens of the United States, but descendants of ancestors born in Mexico.

III. ORGANIZATION OF REMAINDER OF DISSERTATION

Following a review of the literature, the remainder of the dissertation is organized around the materials, procedures, and groups studied; the findings; summary and conclusions.

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[16] D. E. Super, "The Dimensions and Measurement of Vocational Maturity," Teachers College Record, 1955, 57, p. 153.

CHAPTER II

REVIEW OF THE LITERATURE

Organizing discrete classifications for the literature proved to be an insurmountable task. Admitting the existence of overlap, categories chosen for this section are occupational choice, vocational maturity, self-concepts, vocational development, and decision-making. Placement under a given heading depended in part on the wording used by a writer and/or researcher. Citation of the opinions or conclusions drawn by others does not imply acceptance by the author of this paper.

Literature on occupational choice. Major attempts to study the process of occupational choice have been instituted since the late 1940's. From a theoretical framework of vocational maturity, Ginzberg and his associates utilized interviews with a total of sixty-four individuals from alternate school grades six to twelve, and from four different college levels. The subjects were white Anglo-Saxon urban males, Protestant or Catholic, from families in higher income brackets.[1] Furthermore, the subjects were considered to have scored an IQ of 120 or more on a test of intellectual aptitude and to be physically and emotionally free of handicaps. The premise for the selection of subjects was that they would be as free as possible to choose and follow

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[1]E. Ginzberg, et al., Occupational Choice (New York: Columbia University Press, 1951)

an occupation. Although Ginzberg's study did subsequently include seventeen boys from low-income families and ten college women, the principal conclusions were drawn from the sixty-four original single interviews.

The interviews were qualitatively analyzed but not subjected to numerical scoring or statistical treatment. Data were organized under broad categories of "choice of an occupation," "values," "the work area," "time perspective," and "key persons."[2] From the procedures, Ginzberg concluded that occupational choices could be roughly classified as periods of fantasy, tentative, or realistic choice, and that the periods could be considered to coincide with age spans six to eleven, eleven to eighteen, and eighteen to the age of entry into a regular job.

Under the auspices of the Harvard Studies in Career Development, O'Hara reported on a pilot study of interviews in relation to Ginzberg's theory with three boys each from grades one, three, five, seven, and nine. Subjects were chosen on the basis of high, average, and relatively low intelligence. O'Hara concluded that the fantasy choice period may terminate at approximately age eight.[3] Other findings were that role models exerted an influence at every grade level, relatives were involved in 14 of the 15 cases, and "...values and aptitudes appear as bases four to six grade levels below those suggested by Ginzberg..."[4]

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[2] Ibid., p. 54.

[3] Robert P. O'Hara, Talk About Self--The Results of a Pilot Series of Interviews in Relation to Ginzberg's Theory of Occupational Choice (Boston: Center for Research in Careers, Graduate School of Education, Harvard University, October, 1959)

[4] Ibid., p. 13.

Slocum has stated that occupational choice decisions of adolescents are influenced by (1) personal variables (sex, age, physical strength, personal history), (2) social and cultural factors (societal values and other norms, job requirements, employment opportunities), (3) interpersonal relationships received by the decision-maker, and (4) the relevant values of decision-maker's reference groups.[5]

Using a modification of Centers' occupational value scale administered to 2,287 ninth graders in ten California high schools in 1962 and re-administered to 1,790 of the same group a year later, Thompson concluded the relative absence of change in values might indicate such values are well established before high-school entrance.[6] Of the ten job characteristics (called occupational values), over 80% of the students judged as important an interesting job, opportunity for self-expression, security, and a chance to help others.

Holden used a questionnaire as well as an interview with 109 eighth graders whose IQ scores ranged from 84 to 139 with a mean of 108. The procedures were repeated when the group reached the eleventh grade. The focus of the study was on choice of occupational level (not job title) based on the amount of post-high school education. Over the three-year period, high-ability students were persistent; low-ability students changed to lower goals.[7]

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[5]Walter L. Slocum, "Occupational Careers in Organizations: A Sociological Perspective," Personnel and Guidance Journal, XLIII (May, 1965) 9, pp. 860-1.

[6]O. E. Thompson, "Occupational Values of High School Students," Personnel and Guidance Journal, XLIV (April, 1966) 8, pp. 850-3.

[7]George S. Holden, "Scholastic Aptitude and the Relative Persistence of Vocational Choice," Personnel and Guidance Journal, XL (September, 1961) 1, pp. 36-41.

Replication in so far as possible of a 1930 study led Hutson in 1961 to conclude (1) there were a preponderance of choices in the professional category, (2) high school pupils choose occupations with little regard for qualification in general intelligence. Striking differences in reasons given for choice were noted. In 1930, 75-80% listed self-advantages or "interests;" only 43-55% of the 1961 group were so categorized. Relatively large percentages in 1961 mentioned a liking for or an interest in some aspect of the vocation; only one or two per cent in 1930.[8]

Fifty per cent or more of the seventh and eighth grade boys and girls in Diamond's study gave "I think the work would be interesting" as a reason for occupational choice.[9]

Roe has developed a theory about the origin of vocational interests and vocational choice.[10] Simply stated the theory is that parent-child relationships exert the greatest influences. However, in a longitudinal investigation no significant relationships were found between parental attitudes and current vocation.

Wilstach found that interests were mentioned as a factor in vocational choice by 50-74% of fifth to twelfth graders.[11] It could be construed that the concept and importance of "interests" are grasped

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[9]Esther E. Diamond, "Occupational Perceptions of Seventh- and Eighth-Grade Boys and Girls at the Lincoln School (Skokie)," paper delivered at Convention, American Personnel and Guidance Association, April, 1962.

[8]P. W. Hutson, "Vocational Choices, 1930 and 1961," paper presented at Convention, American Personnel and Guidance Association, April, 1962.

[10]Anne Roe and Marvin Siegelman, The Origin of Interests (Washington, D. C.: American Personnel and Guidance Association, 1965)

[11]Wilstach, Ilah M., Study of Vocational Maturity, Los Nietos School District, 1966, unpublished.

at an early age and thereafter maintained. It could also be that "interests" or variations thereof are common in the English language and therefore learned as a word useful in a multiplicity of situations.

A follow-up of a study by Templeton on commitment was completed by Thompson.[12] The original sample (196 freshmen at the University of California College of Agriculture at Davis) in 1960 earned a commitment rating by responding to the question: "When you were thinking about going to college, did you seriously consider any kind of school or college division other than a college of agriculture?" The committed (those answering"No") were described as tending

1. to have decided upon their field of specialization while in junior high school;
2. to have decided upon their specialty before selecting the college to attend;
3. to have chosen a particular college by its reputation in their specialty area;
4. to have indicated that they would not have attended college could they not have pursued their specialty.

The uncommitted student was more likely

1. to have made the decision to go to college after completing the ninth grade;
2. to have first decided to enroll at a particular college, then decided upon his major;
3. to be undecided about specific vocational objectives;
4. to say he would have attended college even if unable to enter the college or major which was his first choice.[13]

Three years later, Thompson surveyed 192 of Templeton's group to compare the 61 committed with the 131 uncommitted. His findings

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[12] O. E. Thompson, "Impact of Commitment upon Performance of College Students," Personnel and Guidance Journal, XLIV (January, 1966) 5, pp. 503-6.

[13] Ibid., p. 503.

were that for the committed the likelihood of transferring to another college was lower. The committed were also less likely to withdraw from the university and were more persistent in the chosen field. Furthermore, the committed earned slightly lower grade point averages. Some explanation for this might be found in the fact that the uncommitted had superior verbal and mathematical aptitude. Thompson described the committed student as "a traditionally oriented, dedicated, hard-working, task-centered student."[14]

All students enrolled in sixteen high schools in which vocational agriculture was part of the curriculum, and all students who enrolled in freshman agriculture in 1962 at the University of California (Davis) were included in a study by Juergenson to obtain evidence about when most high school students make a firm career choice.[15] Of the slightly more than 300 students included, eighty-six had to be dropped a year after selection because of unavailability. Of the 179 freshmen who planned on agricultural careers, seventy-two did not continue the second year. Juergenson concluded in general "the group of agriculture students surveyed in all the schools demonstrated considerable indecision regarding their career choices, or they displayed a lack of knowledge regarding avenues to follow in selecting careers.[16]

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[14] Ibid., p. 506.

[15] E. M. Juergenson, "When Do Students Decide on a Career?" California Education, 11 (November, 1964) 3, pp.25-6-8.

[16] Ibid., p. 28.

Chervenik is critical of vocational counseling as placing "too much emphasis on what an individual wants to be, rather than on what he is willing to do to reach his goal."[17] She believes a firm commitment at college entrance may be undesirable.

Holland classifies himself (along with Super, Tiedeman, Roe and Flanagan) as a major researcher on the topic of vocational behavior. To be termed a "major research program," Holland set up criteria, one or more of which had to be met: (1) sustained (more than five years old); (2) important (based on a consensus of researchers); (3) involving national sampling.[18]

Holland's theory assumes that

> at the time a person chooses a vocation he is the product of his heredity and a variety of environmental forces including peers, parents and other significant adults, social class, American culture, and the physical environment. Out of his experience he develops a hierarchy of orientations for coping with environmental tasks; this hierarchy may be referred to as the pattern of personal orientations. Each of these orientations is related to a particular physical or social environment and to a particular set of abilities. The person making a vocational choice in a sense "searches" for those environments which are congruent with his personal orientations.[19]

Using National Merit Finalists, Holland tested the hypothesis that students will remain in a field of study if they resemble the typical student in that field in terms of aptitudes, achievements,

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[17] Emily Chervenik, "The Question of College Majors," Vocational Guidance Quarterly, 13 (Spring, 1965) 3, p. 178.

[18] John Holland, "Some Explorations of Theory of Vocational Choice: 1. One- and Two-Year Longitudinal Studies," Psychological Monographs No. 545, 76 (1962) 26, p. 3.

[19] Loc. cit.

and personality; the student who leaves that field will be unlike the typical student. Results were interpreted as favorable to the hypothesis.[20]

Forer pleads for the use of clinical techniques in vocational counseling. He says:

> ...The arrival at a vocation for most persons is a process rather than an act. Selecting or being unable to select a vocation are part of a long process rooted in parental history, personality and interactions and in the many crises and adaptations of individual development. Partial "choice" of future vocation as well as feeling and attitudes with vocational implications are developed often during childhood and adolescence, and later work and performance dynamics are lived in tentative form during educational and play activities. Thus vocational choice is less a choice than an evolutionary process with numerous phases and redirections. The meaning of an individual's vocation and its future course is not defined by the nature of the vocation itself, and cannot be fully understood in isolation from his personal history and present psychological organization...[21]

For his doctoral dissertation at Stanford, Montesano designed a study to test two "implicit assumptions in the prevailing theories of vocational development: (1) vocational choice-making results from, and is interwoven in, a maturational process," and (2) "the process of vocational choice-making proceeds in an identifiable and possibly predictable direction.[22]

> ...Assuming that vocational choice-making does proceed in a developmental fashion, then there should be significant differences between youngsters of varying age groups. Thus in high school students, the younger boys should rely on simple stated interests in choice-making, while older boys should tend to be more influenced by their abilities. One might further expect older boys to be more aware of occupational requirements, duties, conditions of work and opportunities, and to use this awareness in making vocational choices. Finally, older boys should consider a greater number of factors when making choices. ...

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[20]John L. Holland and Robert C. Nichols, "Explorations of a Theory of Vocational Choice. III. A Longitudinal Study of Change in a Major Field of Study," Personnel and Guidance Journal, XLIII (November, 1964) 3, pp. 235-242.

[22]Nicholas Montesano and Harold Geist, "Differences in Occupational Choice Between Ninth and Twelfth Grade Boys," Personnel and Guidance Journal, XLIII (October, 1964) 2, p. 150.

In Montesano's study, the major determinants of choice for ninth grade boys were interest and personal need satisfaction; for twelfth grade boys the determinants were the same, but the researcher compared differential responses and concluded there were grade-level differences in the predicted direction posited by the general theory of vocational development.

Bohn supported "other findings and occupational stereotypes indicating that people with different vocational interests have different needs."[23]

The following tentative observations resulted from a follow-up study of superior students by Sanborn:[24]

1. Although a student's career goals may change several times after he begins high school, the fact that he is goal-oriented may give him a motivational advantage over the student who has no goal. In so far as scholastic performance is concerned, temporary goals may have the same functional effects as stable goals.

2. Experimenters who undertake counseling and guidance of high-ability underachievers may find it fruitful to test treatments focused more on long-range goal-setting than on study skills, adjustment to school, and the like.

3. The process of vocational development toward a specified career choice may be typically longer and/or more difficult for persons whose values are primarily oriented toward the "humanities" than it is for those oriented toward scientific fields.

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[23] Martin J. Bohn, Jr., "Psychological Needs Related to Vocational Personality Types," Journal of Counseling Psychology, 13 (1966) 3, pp. 308-9.

[24] Marshall P. Sanborn, "Vocational Choice, College Choice, and Scholastic Success of Superior Students," Vocational Guidance Quarterly, 13 (Spring, 1965) 3, p. 168.

> 4. Problems of vocational choice are often difficult for high-ability students. The students may be encouraged in many directions because they perform well at many tasks. Their interests are often broad, and they find many fields potentially exciting. Results of aptitude and interest measures, and predictions based on past performances may be of little use to them. Students who cannot focus upon fields of choice may benefit greatly from summer programs involving actual exploratory vocational experiences which enable them to relate what they observe in the career environment to their own deepest values and life objectives.

As a part of the work of the Research and Guidance Laboratory for Superior Students, University of Wisconsin, a study was made of "possible relationships between superior students' vocational goals, their educational goals, their reasons for selecting particular colleges to attend, and their success or lack of success in their first semester of college."[25] One of the findings was that there was a relationship between scholastic success and degree of specificity of vocational goals. "There was some evidence to suggest that scholastic success may be related to tenure of vocational choice."[26] Furthermore, indecision about career goals was four times as common among unsuccessful students as it was among the successful ones.[27]

Literature on vocational maturity. Super launched the Career Pattern Study in the early 1950's. Super describes the longitudinal study as "concerned not only with observing and describing vocational

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[25] Ibid., p. 162.
[26] Ibid., p. 165.
[27] Ibid., p. 167.

behavior but also with assessing such behavior from two related, but conceptually distinct, frames of reference: vocational maturity and vocational adjustment."[28]

The second monograph from the Career Pattern Study is entitled The Vocational Maturity of Ninth Grade Boys. This publication reports on data from 105 boys. Hypothesizing that vocational behavior would consist of five broad "dimensions," each with two or more indices, or a total of twenty, the staff of the Career Pattern Study utilized various methods of measurement to arrive at an index of vocational maturity. Super's methods of measurement included the following:

Interest Maturity Scale of the Strong Vocational Inventory Blank
Content analysis of typescripts of recorded interviews
Inventory of Work Values
Personal Data Blank
Otis Quick-Scoring (Gamma) Test
Life Planning Questionnaire (Hamburger's)

Each of the measurements provided a numerical score. Of the twenty indices tried out, six were internally consistent and positively interrelated. In other words, after statistical treatment including correlations and factor analysis, the data were interpreted by the researchers to measure two dimensions: orientation to choice tasks and use of resources. The latter was deemed of marginal value. Of the following six factors identified in vocational maturity measures, the first five were considered to be subsumed under the dimension of orientation to choice tasks:

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[28] D. E. Super and Phoebe L. Overstreet, The Vocational Maturity of Ninth Grade Boys (New York: Teachers College, Columbia University, Bureau of Publications, 1960) p. 8.

1. Concern with choice
2. Acceptance of responsibility
3. Specificity of information
4. Specificity of planning
5. Extent of planning
6. Use of resources

Reporting on the second data collection period for the Career Pattern Study, the senior year of high school, and the subsequent factor analyses, Heyde stated:

> Boys with better than average factor scores for their grade level have more occupational information than their fellows. At both grade levels (ninth and twelfth) this information is about training, educational, and psychological requirements; nature of and rationale for job duties; earnings from and hours of work; and opportunities in terms of supply and demand, entry, advancement, and transfer.[29]

Reichman has also reported on the continuing work of Super's Career Pattern Study and the relationship between the factors of vocational maturity and a group of concurrent variables (socio-economic status of the family; ability and achievement; vocational aspiration; participation; and description) for 103 boys in the ninth grade and the same boys in the twelfth grade.[30] Focus was on the construct of vocational maturity. Reichman concluded that Occupational Information: Training and Educational Requirements may be the most appropriate measure of vocational maturity during the high school years. He also noted that the factor Consideration of Occupational Alternatives and Contingencies appeared to be an adequate measure specific to the twelfth grade. Because the factor correlated significantly with after-school and summer employment, Reichman further concluded that "exposure to work is necessary before this factor becomes operative."

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[29] Martha B. Heyde, "Vocational Maturity in Grades Nine and Twelve," Paper delivered at 1966 Convention, American Personnel and Guidance Association, Session 177.

[30] Walter Reichman, "Variables Associated with Vocational Maturity," Paper delivered at 1966 Convention, American Personnel and Guidance Association, Session 177.

Gribbons used "a logically derived interview schedule and scoring manual" with 111 eighth grade boys and girls to measure readiness for vocational planning, the main criteria for which "are students' awareness of, and consideration of, important factors when making decisions, and willingness to take responsibility for their decisions."[31] When the same youngsters were in the tenth grade, the interview schedule was re-administered to 110 of the subjects. Gribbons found that these youngsters increased in their relation to occupational decisions, were more willing to take responsibility for their decisions, and continued to increase in both awareness and accuracy of appraisal of abilities. Also, more factors were considered when making educational-vocational decisions.[32] The researcher noted that some eighth graders were as "mature" as some tenth graders and advocated not delaying curriculum choices for students ready to make vocational decisions.

Literature on self concepts. Super has defined vocational self concept as "the constellation of self attributes considered by the individual to be vocationally relevant, whether or not they have been translated into a vocational preference."[33] Elements of a self-concept theory of vocational development have been listed by Super as:

1. Self concept formation
2. Exploration
3. Self-differentiation
4. Identification
5. Role-playing
6. Reality testing
&. Translation of self concepts into occupational terms
8. Implementation of the self concepts

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[31]Warren D. Gribbons, "Changes in Readiness for Vocational Planning from the Eighth to the Tenth Grade," Personnel and Guidance Journal, XLII (May, 1964) 9, p. 908.

[32]Ibid., p. 913.

[33]Donald E. Super, et al., Career Development: Self-Concept Theory (New York: College Entrance Examination Board, 1963) p. 20.

According to Super, many boys involved in the Career Pattern Study had difficulty with the question "What kind of person are you?" Even in the fourth interview, when the question was posed, the boys seldom enlarged upon "average." "They seemed not to have formulated self concepts, not accustomed to putting the concepts into words..."[34]

Perhaps the self-concept theory became too closely aligned with the original formulation of vocational guidance--the person-job matching--the major difference being the time factor and individual responsibility.

Wilstach has also reported on a lack of evidence to support the idea that an occupational choice is an implementation of the self-concept.[35] It may be that adolescents are still too unsure of themselves, too self-conceptually immature, to fit neatly into the theoretical pattern. Indeed, occupational choice may be of assistance in fashioning a self concept as well as a vocational identity, rather than an end result.

Jordaan develops the concept of vocational exploratory behavior which he defines as referring to

> activities, mental or physical, undertaken with the more or less conscious purpose or hope of eliciting information about oneself or one's environment, or of verifying or arriving at a basis for a conclusion or hypothesis which will aid one in choosing, preparing for, entering, adjusting to, or progressing in, an occupation.[36]

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[34] Ibid., pp. 25-26.

[35] Wilstach, op. cit.

[36] Super, et al., op. cit., p. 59.

Forer criticizes statements of vocational behavior because they "tend to disregard the intrapsychic organization of work activities with the life history and the personality structure."[37]

Field chose to criticize Super's part in Career Development: Self-Concept Theory by noting that the latter author had not materially developed his original contributions. Paraphrasing Field, he offered for an "ideal" individual choice as ability to perform, satisfaction of wants, and willingness to undertake.[38]

Stefflre has advanced some testable hypotheses concerning "possible relationships among the self, the self-concept, the 'occupational persona,' and the occupational role expectation."[39] He posits that "the choices moving an individual toward an occupation are of variable importance depending upon his age, sex, social class, nationality, and other conditions. For some people, vocational development and occupational choice may be a very central and ego-involving personality statement, while for others it may be quite peripheral and have little significance for their identity as persons.[40]

By comparing self ratings with ratings of two preferred and two non-preferred occupations from 90 male liberal arts students at Rutgers, Oppenheimer concluded "there is a substantial relationship between self concepts and occupational preferences for the average college student."[41]

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[37]Forer, op. cit., p. 868.

[38]Frank L. Field, "Self as Process: A Revision of Vocational Theory Directed Toward the Study of Individual Development in the Vocational Situation," Harvard Studies in Career Development No. 26 (Cambridge, Massachusetts: Harvard Center for Research in Careers, 1962)

[39]Buford Stefflre, "Vocational Development: Ten Propositions in Search of a Theory," Personnel and Guidance Journal, XLIV (February, 1966) 6, p. 611.

[40]Ibid., p. 615.

Literature on vocational development. The Vocational Development Project at the University of Iowa was established by Crites with one of the goals specified as the construction of "a meaningful and practical inventory of a young persons's maturity" for use in career counseling.[42] Crites constructed a Vocational Development Inventory directed toward the measurement of both vocational attitudes and vocational competence. The Attitude Test, intended for incorporation in the Inventory, was standardized initially on 2822 subjects in selected schools of the Cedar Rapids, Iowa, elementary and secondary system. The major findings, reported in Psychological Monographs No. 595, indicated that

> (a) verbal vocational behaviors are monotonically related to both age and grade, but are more frequently associated with the latter than the former;
>
> (b) trends in responses over age and grade are from True to False; and
>
> (c) stages in the maturation of vocational attitudes are primarily associated with the transitional points in the educational system--...[43]

The Vocational Development Inventory was used by Wilstach with 58 subjects, grades five through twelve, but average scores by grade level failed to corroborate the virtual consistency of increasingly higher scores found by Crites despite grade- and age-score correlations of .419 and .388 respectively.[44]

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[41] Ernest A. Oppenheimer, "The Relationship Between Certain Self Constructs and Occupational Preferences," Journal of Counseling Psychology, 13 (1966) 2, p. 196.

[42] John O. Crites, "Measurement of Vocational Maturity in Adolescence: 1. Attitude Test of the Vocational Development Inventory," Psychological Monographs, No. 595, 79 (1965) 2, p. 1.

[43] Ibid.

[44] Wilstach, op. cit.

Borow takes the central concern of career development research to be "a search for the psychological meaning of vocationally relevant acts (including the exploratory vocational behavior of youth) and of work itself in the human experience."[45]

Tiedeman suggests the criterion of vocational development should be the work history. "This spreading of a life across the record of a work history is the vocational development about which we must always strive to formulate definite and verifiable propositions."[46]

Using Wilensky's study as a piece of evidence, Slocum points out the fallacy of considering an occupational career as orderly progression. Only about thirty per cent of the 678 men, ages twenty-five to fifty-five, in the cited study had as much as half their labor force participation in an orderly career.[47]

LoCascio cautions that "thinking about vocational development only in terms of continuity and progress may result in insufficient attention being given to delayed and impaired vocational development."[48]

Vocational development, as conceived by Hershenson, is "a decision-making process which creates two trends: (a) narrowing the range of possibilities, and (b) strengthening the possibilities which remain."[49]

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[45]Henry Borow, "Vocational Development Research: Some Problems of Logical and Experimental Form," Personnel and Guidance Journal XL (September, 1961) 1, p. 23.

[46]David V. Tiedeman, "Decision and Vocational Development," Personnel and Guidance Journal, XL (September, 1961) 1, p. 21.

[47]Walter L. Slocum, "Occupational Careers in Organizations: A Sociological Perspective," Personnel and Guidance Journal, XLIII (May, 1965) 9, p. 862.

[48]Ralph LoCascio, "Delayed and Impaired Vocational Development: A Neglected Aspect of Vocational Development Theory," Personnel and Guidance Journal, XLII (May, 1964) 9, p. 887.

[49]David B. Hershenson and Robert M. Roth, "A Decisional Process Model of Vocational Development," Journal of Counseling Psychology, 13 (1966) 3, p. 368.

Literature on decision-making. Tiedeman has been vociferous in urging that the "structure of decision must be specified before investigations of the theory of vocational development can enter new phases."[50] For him, each decision in the vocational development process entails a period of anticipation and a period of implementation or adjustment. Anticipation can be considered in stages of exploration, crystallization, choice, and specification. The stages of induction, transition, and maintenance are subsumed under the period of implementation. As Tiedeman sees it, "Vocational development then is self-development viewed in relation with choice, entry, and progress in educational and vocational pursuits. It is a process occurring over time in man who is capable of anticipation, experience, evaluation, and memory."[51]

For the above delineation of what he terms a "paradigm," Tiedeman acknowledges the assistance of Robert P. O'Hara who has been associated with Tiedeman and others at the Harvard Center for Research in Careers.

In comparing his suggestion of a theory of vocational development based on existentialism to other theories, Simons selects Tiedeman and O'Hara as having come closest to his own. "The strong point in Tiedeman and O'Hara that the process of vocational development is not one major decision but an infinity of minor ones could not be more acceptable to the existentialist."[52] According to Simons, "... The existentialist is suggesting that one examine the career choice to explain the mystery of the life process."[53]

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[50]Tiedeman, op. cit., p. 15.

[51]Ibid., p. 18.

[52]Joseph B. Simons, "An Existential View of Vocational Development," Personnel and Guidance Journal, XLIV (February, 1966) 6, p. 609.

Harren found that groups of male college students were at one or another of four stages (Exploration, Crystallization, Choice and Clarification) in a study patterned after Tiedeman and O'Hara's vocational decision-making paradigm.[54]

Using concepts and affect charge for a theoretical framework of career development, Fletcher hypothesizes "that the great majority of career decisions are made on the basis of the dominating positive affect charge career concept at the time the decision is made. Such a decision may be a good one if the individual

> (1) has had a sufficient breadth of experiences resulting in ample positive affect charge concepts,
>
> (2) has a reasonable store of career concepts based on realistic opportunities and
>
> (3) is not confused or dominated by emotional conflicts from personal problems or inability to satisfy extraneous needs.[55]

Fletcher sees individuals who need counseling as those lacking in the "ifs".

Tiedeman views the aim of vocational counseling somewhat differently as the enhancement of the "operation of reason in this dynamic process of vocational development" and the freeing of the person "for progress in taking and acting upon a particular decision as well as in viewing decisions in relation with those taken and those possible. In this way, the counselor hopes to bring each client in his responsibility to view his educational and vocational decisions as a means-end chain; that which is an end at an earlier time is to become a means for a later goal."[56]

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[53] Ibid., p. 604.

[54] Vincent A. Harren, "The Vocational Decision-Making Process Among College Males," Journal of Counseling Psychology, 13 (1966) 3, p. 271.

Discussion. Criticism can be aimed at almost any study from the standpoint(s) of being cross-sectional, involving a small or select population, focusing on a narrow aspect, or offering findings that are influenced by the materials and procedures used or the organization of data. Furthermore, many stop at the "status quo" level. Defense of almost any study can be offered with the blanket reminder of the frustrating problems connected with all aspects of research in the behavioral sciences.

Any compilation or selection of writings pertaining to a given topic may also fail to be entirely satisfactory to all readers. The writer recognizes the limitations, and in an effort to deal with them, has taken the on-going work of Super and Crites as major contributions offering research possibilities for one interested in the construct of vocational maturity. The utilization of their materials in the present study has the following negative features: lack of originality, cross-sectional with reliance on the status quo, limited numerically as well as geographically, and almost singular emphasis on occupational choice. On the other hand, positive statements about the study might include phrases dealing with the population and with the furnishing of additional data.

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[55]Frank M. Fletcher, "Concepts, Curiosity and Careers," Journal of Counseling Psychology, 13 (1966) 2, pp. 137-8.

[56]Tiedeman, op. cit., p. 19.

CHAPTER III

MATERIALS, PROCEDURES, AND GROUPS STUDIED

Materials and procedures were adequately described in the Preliminary Report on Procedures No. 1. However, at the time that report was written, the group at School A was described only in terms of chronological age, birthplaces, and school ability scores.

Community and school background. One of the omissions of description was that of sociological data. It is the purpose of this section to furnish some of that information.

School A is one of the fifty-three senior high schools (including special schools) in Los Angeles City Unified School District. With the junior college district included, Los Angeles City Schools comprise "the nation's second largest school system and certainly the fastest growing large school system in the country."[1]

School A combines junior and senior high grades on a single campus. The student body is drawn from a somewhat larger area than the community in which the educational facility is located. However, U. S. Census data for the community are presented in the belief that they give as close a view as possible of the living conditions of the students served by School A.

The total population for Community A in 1960 was 31,396, of which 16,961 or 50.8% were listed as having a Spanish surname. Of that number, 5,290 were foreign born. Only 773 or 2.5% of the residents were Negro.[2]

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[1]Los Angeles City Schools, Public Information Office, fact sheet printed 11-1-65.

[2]U. S. Department of Commerce, U. S. Censuses of Population and Housing (Washington, D. C.: Bureau of Census, 1960)

Of the 10,496 employed, 41.8% worked in manufacturing. Unemployment percentages for males age fourteen and over were 7.7 for the total population, 8.8 for Spanish surnamed. The higher unemployment rate for the latter group may be a function of general youthfulness and lower education.

The Spanish surnamed had a median age of 24.4 for males, 23.9 for females. These figures contrast with the total median ages of 31.5 and 31.6, indicating that the Spanish surnamed are considerably younger. For Super's study, the median age in Middletown was 40.9 based on 1950 census data when the median U. S. age was 30.2.

On the whole, the median school years completed for adults age twenty-five and over in Community A (8.9 total and 8.1 for Spanish surnamed) reflect large numbers of educationally disadvantaged. Figure 1 presents other percentages for Community A and Super's Middletown:

	Percentages	
	School A Community	Middletown
4 years or more of college	1.2	6.1
4 years high school	10.0	31.8

FIGURE 1

SCHOOL A COMMUNITY AND MIDDLETOWN
EDUCATIONAL COMPARISONS

It is clear that Super's Middletown was better educated, although the median school years completed was only 9.5.

Despite the indication of the Spanish surnamed's "under-age" and "under-schooling," the median family income was listed as only $80 less than the total in Community A ($5217 versus $5297). For the State of California the statistics are $5533 (Spanish), $6726 (total), and $4971 (non-white). Therefore, the area of School A is economically depressed with earnings averaging only slightly above that for the state's non-whites. It is worth noting, however, that nationally the poverty-level income is $3000. A total of 801 families in Community A earned less than $3000.

It was pointed out that the Spanish and non-Spanish were similar in terms of family income. However, larger families for the former may reduce the per capita income. In California, the total population averages 3.19 persons per family, whereas the largest minority group averages 4.01. Assuming the same ratios for the population segments in the community of School A, it could mean that the per capita incomes averaged $1303 and $1661, a difference of $258.

Up to this point, reliance has been placed upon 1960 census data to provide descriptive material. Housing characteristics shown in Figure 2 add another dimension.[3]

Population decreased 1046 from the year 1960 to the year 1963. On the other hand, dwelling units increased 1153 during the same period, the difference being accounted for by a gain of 1183 multiple units and a loss of thirty single family dwellings. The picture

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[3]City of Los Angeles, Population Estimate and Housing Inventory.

	Number	Per Cent
Total Population 7/1/63	30,350	
Total Population 1960 Census	31,396	
Population per Household	3.08	
Population over 65	3,467	11.0
Total Dwelling Units 7/1/63	10,904	100.0
Single family	7,805	71.6
Multiple family	3,099	28.4
Total Dwelling Units 1960	9.751	100.00
Single family	7,835	80.4
Multiple family	1,916	19.6
Owner Occupied	3,163	32.4
Sound Housing Units	6,614	67.8
Deteriorated Housing Units	2,398	24.6
Dilapidated Housing Units	739	7.6
Median Value	$11,338	
Average Contract Rent	$54.46	
One-room Housing Units	606	6.2
Housing Units Occupied by one person	1,990	20.4

FIGURE 2

POPULATION AND HOUSING CHARACTERISTICS
COMMUNITY A

presented in Figure 2 is that of a community in transition. This is underscored by later statistics from the City of Los Angeles showing that the population on April 1, 1966, was 30,615, representing a loss of 1046 from 1960 but a gain of 265 from 1963.[4] Dwelling units (10,904 in 1963) numbered 10,150 in 1966, a decrease of 754. During the six-year period 1960-6, occupied dwellings increased 120 (9147 to 9267).

In 1960 approximately one-third of the housing warranted a description of deteriorated or dilapidated. About two-thirds of the units were occupied by non-owners who paid an average rental of $54.46 for housing with a median value of $11,338.

Twenty per cent of the housing units in 1960 were occupied by one person, but the population per household averaged 3.08. In 1963 the average per dwelling was 2.78; in 1966 it was 3.02. Elementary school enrollment 1960-6 increased 38 to 2719.

It can be inferred that Community A suffered a temporary loss of population which is in the process of recovery. Less desirable housing is being replaced with multiple-story apartments, the rental for which exceeds the current median rate. Elementary school population has been relatively stable.

Another way of describing Community A is through an examination of land use. Of 2276 acres (3.56 square miles), 37.4% in 1960 were residential, 42.1% open land. The open land consists of hillside property which has remained undeveloped because up to this point development has not been considered economically feasible. Figure 3

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[4] Ibid.

details the land use acreages.[5] None of the open land is devoted to agriculture, but 49.4% is called vacant usable acreage.

	Acres	Per Cent
Total	2276	100.0
Residential	852	37.4
Commercial	189	8.3
Parking	6	.3
Community Service	124	5.4
Recreational	54	2.3
Industrial	130	5.7
Open Land	959	42.1
Vacant Usable	474	49.4

FIGURE 3

LAND USE ACREAGES
COMMUNITY A

Community A's business section basically lines a single major cross-town street. Visually, it appears marginal at best and largely depressed.

Community B. Data similar to that furnished for Community A is not now at hand for Community B. However, an application in 1965 for compensatory education funds to be used in School B listed the following statistics credited to two sources: Statistical Survey of Aid to Needy Children, Imperial County, and the 1960 Federal census.

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[5] Ibid.

1. Within the boundaries of School District B reside 34.7% of the County's Aid to Families of Dependent Children cases.

2. East of School B, 75% of all housing is below the standard specified by the uniform housing and building code. West of School B, 50% of the housing is below standard.

3. County B has long had one of the highest infant mortality rates in any of California's fifty-eight counties. In 1959 the infant mortality rate was 31.7 per 1000; live births were about one-third greater than the state's rate of 23.6. In 1959 only six counties in California had more than two per cent of the live births take place in unlicensed facilities. More than one-third of all such births in California occurred in County B. The county led the state in the number of live births in unlicensed facilities with 10.2%. In 1958, one per cent of all births in the state took place outside a hospital.

4. School enrollment data revealed a high percentage of Mexican-American families whose main income was from farm labor which is either seasonal and/or unskilled. Community B had the second lowest median income in the state for cities of 10,000 or more population.

5. The percentage of population in the county 25 years or older with less than five years of school is 23.3%, ranking the county 57th in California. Percentages of employed persons in the county classified as professional or semi-professional and kindred workers reached 6.8%, ranking fifty-eighth in California. Percentage of population ages fourteen through seventeen enrolled in school was 86.8%, placing the county forty-ninth in rank. Percentage of county population with at least four years of high school was 33.8%, ranking the county fifty-fourth.

Community A and Community B can be compared at this time only on the basis of percentages of population with at least four years of high school. Community B with 33.8% of the population with at least four years of high school appears to be more than three times better off educationally than Community A with 10.0%.

Note: The writer expects to expand this section at a later date.

CHAPTER IV

FINDINGS

Preliminary Report on Procedures No. 1 contained a modicum of statistics but noted planned additional analyses. Preliminary Report No. 2 was more thorough and, as a result, listed the recommendation that consideration should be given to changing scoring instructions for Interview Index IIA to eliminate weighted scores.

This portion of the paper reports in part on findings following a re-scoring of School A's interviews to rely on raw scores for all indices.

I. VOCATIONAL MATURITY INTERVIEW

History of occupational choice. Thirty present occupational choices were named by School A students, eight of whom mentioned two possibilities. Table I lists the choices and indicates that engineer was predominant with fourteen or 22.6% of the boys.

According to the interviewees (Table II), 79.0% had decided on an occupational choice in grades seven to nine, but 32.2% noted grade nine as a decision point.

When asked about previous choices, thirty-five could name an occupation thought of in the fourth grade; forty-eight gave a choice in the seventh grade. Only seven listed a single consistent

TABLE I

PRESENT OCCUPATIONAL CHOICES

Choice	No.	Choice	No.
archeologist	1	lighting technician	1
architect	3	Marines	1
baseball player	3	electronic technician	1
businessman	1	mechanic	4
carpenter	2	office worker	2
chef	1	painter	1
dentist	1	pilot	2
designer	1	printer	1
doctor	3	scientist	2
draftsman	4	space explorer	1
graphic arts	1	storekeeper	1
insurance salesman	1	teacher (shop-2, music, P.E.)	4
engineer	14	technologist	1
jockey	1	upholsterer	3
law enforcement (policeman - 3)	4		
lawyer	4		

TABLE II

GRADE AT WHICH DECISION REACHED

Grade	No.
9	20
8	13
7	16
6	0
5	3
4	4
3	1
2	0
1	1
K	3
Pre-school	3
Unknown	1

choice; thirty had at least two choices; one student a total of five. For those with a present choice and one previous selection, 73.0% listed two occupations that were related.

Of seventeen occupations thought of in the fourth grade, policeman was brought up nine times. Of twenty-three from the seventh grade, engineer was selected by ten.

No definite pattern of choices for individuals emerged from the history, but for the group there appeared to be greater variety with increasing age.

Twenty-eight or 45.2% acknowledged help from no one in reaching a decision; fifteen credited parents with assistance; nine specified teachers as influential, eight referred to relatives; one each mentioned a book or friend as helpful. (Table III)

TABLE III

OCCUPATIONAL CHOICE INFLUENCES

Influence	No.
Self	28
Parents	15
Teacher	9
Relatives	8
Book	1
Friend	1

Interview scores. Using raw scores only and eliminating weighted scores originally planned for Index IIA, the range of scores on the interview was from six to forty-seven with a mean of 22.37. The frequency distribution is shown in Table IV.

TABLE IV

FREQUENCY DISTRIBUTION
TOTAL RAW SCORES

Score	No.
45-49	1
40-44	3
35-39	4
30-34	8
25-29	6
20-24	11
15-19	14
10-14	11
5- 9	4
N	62
M	22.37
SD	9.77

Appendix A, Table of Intercorrelations, Vocational Maturity Interview Scores, indicates some statistical differences brought about through scoring changes. Using weighted scores, the correlation of .926 for Index IIA and total score appeared to place a disproportionate amount of emphasis on Specificity of Information. With raw scores, the first four indices appear to contribute approximately equally to the total score. The remaining two indices, Responsibility for Choice and Commitment to Choice, are correlated to a lesser extent with the total score but offer slightly higher correlations with the total than was true under the previous method of scoring. The differences seem to justify the revised scoring.

Appendix B, Table of Intercorrelations, Vocational Maturity Interview Scores and School Data, reveals relatively minor differences between figures computed on the bases of raw or weighted scores which would be expected because the latter two correlate with each other .961.

Raw scores bring about slightly higher relationships with school data on ability and achievement, but no coefficient of correlation exceeded .370 (total scores and arithmetic reasoning), low enough to suggest that the interview measure is different from the other measures.

Item analysis. Appendix C shows that of the ninety-five items on which a score is possible, only one, Index IVF, Component 3, Acceptance of Responsibility for Occupational Plans, was scorable for as many as thirty-one or fifty per cent of the group. No score was earned on eighteen items. Thirteen items were scorable for thirty to forty-nine per cent. These were:

Immediate choices (high school curricula and courses)	28
Intermediate choices (college, technical institute, etc.)	27
Interests	30
Values	22
Amount of schooling	24
Familial attitudes	20
Special factors (Awareness of contingency factors)	20
Kinds of subjects (high school background)	23
Type of, or content of, training	20
Interests (psychological requirements)	20
Specificity of high school plans	22
Post-high school plans	23
Commitment to stated vocational preference	30

Despite the fact that four indices are involved in the above list, overlap is evident. For example, a statement about plans for college will be

scored under Index IA (Components 1 and 2), Index IIA (Component 1), and Index IIB (Component 5). Statistically, however, with product-moment correlations between indices ranging from .045 to .722, substantial relationships occur in approximately one-fourth of the figures. The highest one is that for Index IIB, Specificity of Planning, with Index IVF, Acceptance of Responsibility for Choice and Planning. Therefore, although scoring might be simplified, a revision does not seem to be necessary.

Work experience. Nineteen or almost one-third of the boys were or had been employed. One had held two jobs. Most frequently mentioned as a source of employment were relatives, followed by friends and parents. Table V delineates the stated sources.

TABLE V

SOURCE OF EMPLOYMENT

Source	No.
Relative	6
Parent	4
Friend	4
Self	3
Ad	2
School	1

Raw score comparisons with Super's data. The Vocational Maturity of Ninth Grade Boys contains information on frequency distributions of raw scores for some sub-sections of the indices. Preliminary Report No. 1 compared scores on Awareness of Factors in Vocational Choice (Index 1A, Component 1) obtained by Middletown students with those of School A.

Table V extends the comparisons for Elements a, b, and c of Index IA, Component 1.

TABLE V

COMPARISONS OF RAW SCORES
INDEX IA - CONCERN WITH CHOICE
COMPONENT 1 - AWARENESS OF THE NEED FOR CHOICE

	Element a		Element b		Element c	
	Immediate Choices		Intermediate Choices		Ultimate Choices	
Score	Super	School A	Super	School A	Super	School A
5	5		2			
4	55	2	55	5		
3	21	2	17		1	1
2	14	11	17	12	29	
1	10	26	13	27	55	11
0		22	1	18	20	50
N	105	62	105	62	105	62

It is tempting to speculate that the differences shown in Table V represent an expected dissimilarity because one ethnic stereotype sometimes attached to Mexican-Americans (School A) is that of generally being present- rather than future-oriented. However, the temptation is resisted in the light of other known population differences as well as the fact that Super's data were collected as a result of four times the number of interviews used in School A. It could be, too, that the questions designed for the current study did not produce scorable responses for the three elements.

From Tables III (Occupational Choice Influences) and V (Comparisons of Raw Scores) it may be inferred that School A students have sensed little stimulation (subtle or otherwise) toward making educational and/or occupational choices.

II. VOCATIONAL DEVELOPMENT INVENTORY

Item analysis. Appendix D, Item Analysis of the Vocational Development Inventory, reveals that students strongly disagreed (75% or more) with the keyed response on Items 6, 41, and 56. As a group they appeared to believe:

> A person can do anything he wants as long as he tries hard.
>
> I want to really accomplish something in my work--to make a great discovery or earn lots of money or help a great number of people.
>
> The greatest appeal of an occupation to me is the opportunity it provides for getting ahead.

Overwhelmingly (75% or more), the group agreed with the key on twenty-five items, nine of which are part of the ten-item D scale. The one remaining statement on the D scale which was marked in the "wrong" direction by approximately one-third of the respondents was No. 44: "My occupation will have to be one which has short hours and nice working conditions."

Intercorrelations. The Table of Intercorrelations, Vocational Maturity Scores and School Data (Appendix B) reveals that the Vocational Development Inventory scores on both the VM and D scales bore a negative relationship to age. This is contrary to the original findings as well as to those uncovered by the writer in a preceding study. The relatively narrow age span of a single grade level may be at least partially responsible. Coefficients of correlation for the VM scale ranged from little or no relationship with age and total raw scores for the interview to some slight relationship with weighted

scores, the D scale, school ability, achievement, and grades. Seven of the eleven coefficients for the D scale were negative, ranging from little or no relationship for all comparisons except IQ (slight) and age (strong).

CHAPTER V

SUMMARY AND CONCLUSIONS

Interview questions. One of the recommendations made by all interviewers was that the interview questions be revised. Appendix E is a copy of the revision. This will probably mean that much of the data collected during the try-out procedures cannot be compared with that collected subsequently. However, it does not rule out desirable comparisons with the foundation study.

Summary. The Final Preliminary Report has been designed to serve as both a complement to previous reports and as a first draft of a planned dissertation.

Conclusions. One of the obvious conclusions to be drawn from this paper is that it has achieved its purposes.

It is considered advisable at this time to delay drawing additional conclusions pending the results of the study toward which all of the initial work has been directed.

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APPENDIX A

TABLE OF INTERCORRELATIONS
VOCATIONAL MATURITY INTERVIEW INDICES

Index	1	2	3	4	5	6	7	8	9
1. IA		.585	.623	.377	.407	.177	.212	.724	.762
2. IIA (Weighted)			.981	.397	.457	.058	.218	.926	.795
3. IIA (Raw Scores)				.432	.466	.068	.195	.919	.788
4. IIB					.722	.045	.520	.635	.719
5. IVF						-.174	.479	.696	.720
6. VA							.111	.248	.396
7. VIF								.363	.433
8. Total (Weighted)									.961
9. Total (Raw Scores)									
M		7.823	18.23	5.226	3.54	3.017	5.158	2.02	35.37	22.37
S.D.		3.392	10.174	2.876	2.522	1.975	2.476	.76	16.209	9.774

KEY

Index

iA	Concern with Choice
IIA	Specificity of Information About the Preferred Occupation
IIB	Specificity of Planning for the Preferred Occupation
IVF	Acceptance of Responsibility for Choice and Planning
VA	Independence of Work Experience
VIF	Commitment to Stated Vocational Preference

APPENDIX B

TABLE OF INTERCORRELATIONS
VOCATIONAL MATURITY SCORES AND SCHOOL DATA

Data	1	2	3	4	5	6	7	8	9	10	11	12
1. Age		.276	-.213	-.172	-.733	-.205	-.183	*.092	*.524	-.024	-.017	-.230
2. VM(Wtd)			.961	.145	-.038	.219	.127	.061	.132	.115	.325	.135
3. VM(Raw)				.223	.093	.336	.182	.127	.245	.149	.370	*.264
4. VDI(VM)					-.165	.255	.274	.308	.204	.223	*.303	-.074
5. VDI(D)						*.240	.196	.022	-.010	-.056	-.165	-.149
6. IQ							.963	.645	.585	.605	.402	.108
7. IQ(S'9)								.635	.524	.563	.361	.081
8. RV									.642	.212	.267	.126
9. RC										.697	.549	.287
10. AF											.711	.273
11. AR												.484
12. G.P.A.												

KEY

No.		M	S.D.
1	Age	177.45	6.028
2	Vocational Maturity Interview Scores (Weighted)	35.37	16.209
3	Vocational Maturity Interview Scores (Raw Scores)	22.37	9.774
4	Vocational Development Inventory (Vocational Maturity Scale)	30.5	5.385
5	Vocational Development Inventory (Deviant Scale)	1.23	.883
6	IQ	96.61	7.483
7	IQ (Stanines)	4.54	.954
8	Reading Vocabulary (Stanines)	3.86	1.732
9	Reading Comprehension (Stanines)	4.14	1.83
10	Arithmetic Fundamentals (Stanines)	3.95	1.691
11	Arithmetic Reasoning (Stanines)	3.91	2.29
12	Grade Point Average	2.29	.678

* Eta coefficient used rather than product-moment because of non-linear regression.

APPENDIX C
ITEM ANALYSIS
VOCATIONAL MATURITY INTERVIEW

	N
Index IA. Concern with Choice	
COMPONENT 1. AWARENESS OF THE NEED FOR CHOICE	
Element a. Immediate choices (high school curricula and courses)	28
Element b. Intermediate choices (college, technical institute, etc.)	27
Element c. Ultimate choices	9
COMPONENT 2. AWARENESS OF FACTORS IN VOCATIONAL CHOICE	
(1) Mental ability	12
(2) Special aptitudes	14
(3) Interests	30
(4) Values	22
(5) Personality	13
(6) Physical requirements	4
(7) Sacrifices	2
(8) Amount of Schooling	24
(9) Cost of training	2
(10) Availability of educational facilities	3
(11) Earnings	17
(12) Other benefits	1
(13) Physical conditions	2
(14) Hours	1
(15) Regularity of employment	4
(16) Psychical conditions	3
(17) Social conditions	3
(18) Location	2
(19) Advancement	2
(20) Supply and demand	1
(21) Familial attitudes	20
COMPONENT 3. AWARENESS OF CONTINGENCY FACTORS	
Element a. Continued parental psychological support	8
Element b. Continued financial means	5
Element c. Military service (including war)	4
Element d. Special factors	20

APPENDIX C (Cont'd)

	N
INDEX IIA. Specificity of Information About the Preferred Occupation	
COMPONENT 1. REQUIREMENTS	
a. High school background	
(1) educational level	15
(2) academic standing	3
(3) kinds of subjects	23
b. Training and/or education	
(1) type of, or content of, training	20
(2) length or extent of training	8
(3) location of training facilities	4
c. Economic requirements	
(1) how much capital is needed	0
(2) cost of maintenance	0
(3) facilities for financing	3
d. Psychological requirements	
(1) abilities	14
(2) interests	20
(3) personality traits	9
e. Physical requirements	
(1) health requirements	2
(2) physical demands	4
(3) implications of age	0
COMPONENT 2. DUTIES	
a. What is done	
(1) typical tasks	14
(2) machines	2
(3) setting	6
b. Why it is done	
(1) relates specific job to the procedure	5
(2) how and why the tools are used	0
(3) why the work is or is not important	4
c. How well it must be done	
(1) detail, work tolerance, care	2
(2) consequences of mistakes	0
(3) timing or pace	0

INDEX IIA. (Continued) N

COMPONENT 3. CONDITIONS OF WORK

a. Monetary rewards
- (1) basic wages 10
- (2) opportunities to supplement income 0
- (3) starting salary, maximum salary, etc. 0

b. Hours
- (1) how many hours are worked 0
- (2) overtime, shifts, irregular hours 1
- (3) time available to spend away from the job 0

c. Security
- (1) tenure, seasonality, etc. 3
- (2) workman's compensation, etc. 0
- (3) affiliation with unions, professional groups 0

d. Physical conditions
- (1) hazards to health 0
- (2) precautions 0
- (3) usual situational conditions 1

e. Psychosocial conditions
- (1) challenge, variety, and/or routine 1
- (2) customers or associates 3
- (3) prestige 2

COMPONENT 4. OPPORTUNITIES

a. Entry
- (1) how a job in the field can be obtained 4
- (2) usual entry job, or jobs 0
- (3) how applicants are selected for entry jobs 1

b. Supply and demand
- (1) local employment prospects 0
- (2) employment prospects nationally 1
- (3) how vocation might be affected by economic trends, war, depression, or technological change 0

c. Advancement and transfer
- (1) lines and limits of advancement 0
- (2) how advancement is earned 1
- (3) requirements and/or the conditions of jobs to which he could transfer 1

APPENDIX C (Cont'd)

		N
Index IIB.	Specificity of Planning for the Preferred Occupation	
COMPONENT 1.	Steps taken to obtain information for high school planning	11
COMPONENT 2.	Specificity of high school plans	22
COMPONENT 3.	Specificity of alternative high school plans	1
COMPONENT 4.	Steps taken to obtain information for post-high school planning	10
COMPONENT 5.	Post-high school plans	23
COMPONENT 6.	Alternative post-high school plans	3
COMPONENT 7.	Entry plans	2
COMPONENT 8.	Planning to facilitate entry	1
COMPONENT 9.	Planning for advancement in the occupation	2
COMPONENT 10.	The extent of planning activity	19
Index IVF.	Acceptance of Responsibility for Choice and Planning	
COMPONENT 1.	Acceptance of responsibility for choice	15
CCMPONENT 2.	Acceptance of responsibility for educational plans	14
COMPONENT 3.	Acceptance of responsibility for occupational plans	31
Index VA.	Independence of Work Experience	
COMPONENT 1.	Source of Work	12
COMPONENT 2.	Auspices of work	12
COMPONENT 3.	Supervision on the job	3
COMPONENT 4.	The nature of responsibility exercised on the job	1
COMPONENT 5.	The extent of paid experience	11
Index VIF.	Commitment to Stated Vocational Preference	30

APPENDIX D

ITEM ANALYSIS
VOCATIONAL DEVELOPMENT INVENTORY

	Key	T	F	NM	D*
1. You have to know what you are good at, and what you are poor at, before you can choose an occupation.	F	58	4		*
2. Ask others about their occupations, but make your own choice.	F	56	6		*
3. It's unwise to choose an occupation until you have given it a lot of thought.	F	56	6		*
4. Once you make an occupational choice, you can't make another one.	F	6	55	1	
5. In making an occupational choice, you need to know what kind of person you are.	F	45	17		
6. A person can do anything he wants as long as he tries hard.	F	54	8		
7. Your occupation is important because it determines how much you can earn.	F	37	24	1	
8. A consideration of what you are good at is more important than what you like in choosing an occupation.	F	38	24		
9. Plans which are indefinite now will become much clearer in the future.	F	51	10	1	*
10. Your parents probably know better than anybody which occupation you should enter.	F	8	54		
11. Work is worthwhile mainly because it lets you buy the things you want.	F	34	28		
12. Work is drudgery.	F	6	56		
13. Why try to decide upon an occupation when the future is so uncertain.	F	9	52	1	
14. It's probably just as easy to be successful in one occupation as in another.	F	22	40		
15. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.	F	40	22		

* D Scale - negative.

	Key	T	F	NM	D*
16. There are so many factors to consider in choosing an occupation, it is hard to make a decision.	T	52	10		
17. Sometimes you can't get into the occupation you want to enter.	F	52	10		*
18. You can't go very far wrong by following your parent's advice about which occupation to enter.	F	33	28	1	
19. Working in an occupation is much like going to school.	F	43	18	1	
20. The best thing to do is to try out several occupations, and then choose the one you like best.	F	35	27		
21. There is only one occupation for each individual.	F	14	48		
22. The most important consideration in choosing an occupation is whether you like it.	F	57	5		*
23. Whether you are interested in an occupation is not as important as whether you can do the work.	F	29	33		
24. You get into an occupation mostly by chance.	F	6	56		
25. It's who you know, not what you know, that's important in an occupation.	F	7	55		
26. Choose an occupation which gives you a chance to help others.	F	46	16		
27. Choose an occupation, then plan how to enter it.	T	51	11		
28. Choose an occupation in which you can someday become famous.	F	18	43	1	
29. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.	T	50	12		
30. Choose an occupation which allows you to do what you believe in.	T	46	16		

APPENDIX D (Cont'd)

	Key	T	F	NM	D*
31. The most important part of work is the pleasure which comes from doing it.	T	49	13		
32. It doesn't matter which occupation you choose as long as it pays well.	F	13	49		
33. As far as choosing an occupation is concerned, something will come along sooner or later.	F	36	26		
34. Why worry about choosing an occupation when you don't have anything to say about it anyway.	F	6	56		
35. The best occupation is one which has interesting work.	F	52	10		*
36. I really can't find any occupation that has much appeal to me.	F	13	49		
37. I have little or no idea of what working will be like.	F	17	45		
38. When I am trying to study, I often find myself daydreaming about what it'll be like when I start working.	F	38	24		
39. If I have to go into the military, I think I'll wait to choose an occupation until I'm out.	F	16	46		
40. When it comes to choosing an occupation, I'll make up my own mind.	T	48	13	1	
41. I want to really accomplish something in my work--to make a great discovery or earn lots of money or help a great number of people.	F	53	9		
42. As long as I can remember I've known what I want to do.	F	27	34	1	
43. I can't understand how some people can be so set about what they want to do.	F	23	39		
44. My occupation will have to be one which has short hours and nice working conditions.	T	20	42		*
45. The occupation I choose has to give me plenty of freedom to do what I want.	F	25	37		

	Key	T	F	NM	D*
46. I want an occupation which pays good money.	F	60	2		*
47. I often wonder how successful I'll be in my occupation.	F	60	2		*
48. I know which occupation I want to enter, but I have difficulty in preparing myself for it.	F	38	24		
49. I know very little about the requirements of occupations.	F	32	30		
50. I want to continue my schooling, but I don't know what courses to take or which occupation to choose.	F	36	26		
51. I spend a lot of time wishing I could do work that I know I cannot ever possibly do.	F	26	36		
52. I'm not going to worry about choosing an occupation until I'm out of school.	F	5	57		
53. If I can just help others in my work, I'll be happy.	F	40	22		
54. I guess everybody has to go to work sooner or later, but I don't look forward to it.	F	7	55		
55. I often daydream about what I want to be, but I really don't have an occupational choice.	F	21	41		
56. The greatest appeal of an occupation to me is the opportunity it provides for getting ahead.	F	57	5		
57. Everyone seems to tell me something different, until now I don't know which occupation to choose.	F	20	42		
58. I have a pretty good idea of the occupation I want to enter, but I don't know how to go about it.	F	35	27		
59. I plan to follow the occupation my parents suggest.	F	16	46		
60. I seldom think about the occupation I want to enter.	F	24	38		

APPENDIX E

INTERVIEW QUESTIONS

This interview is to find out the kinds of choices made by young people planning to prepare for an occupation. The more you can tell me, the easier it is to classify your statements. Even if you think I ought to know what you're talking about, tell me as much as possible. Although I may ask some questions which seem to you to need very little in the way of an answer, try to answer as completely as you can. The questions are:

1. What did you say the first time someone asked what you'd like to be when you grow up?
2. How old were you then?
3. Can you remember what you wanted to be at grade 4?
4. At grade 7?
5. Now what would you like to do?
6. When did you decide? (How old were you or in what grade?)
7. What does this mean in planning your education in high school?
8. What about after high school?
9. What kind of person does that kind of work? (What is special about a _____? Does he need special abilities, interests, personality characteristics?)
10. How does a person go about getting into that line of work?
11. What will prevent you from reaching your goal?
12. Why is the choice a good one for you?
13. What are some advantages of that occupation?
14. Can you tell me more about the occupation? (Duties, conditions of work, opportunities, how you get such a job, and what other positions you might fill after your training, education, or experience)
15. What have you done or what are you doing now to help you in your later work?
16. Who helped you reach your decision?
17. How did you get information about the occupation?
18. Are you employed now?
19. If so, what are you doing?
20. How did you get your job?
21. You have told me about the occupation of your choice; what do you really think you will be doing after you finish school?